

What is claimed is:

1. A method for identifying call appearance values in a PBX device coupled to multiple ISDN BRIs said method, for each BRI coupled to the PBX device, comprising the steps of:

- (a) generating a first call from PDN1 to PDN2 in the same BRI circuit; and
- (b) monitoring the message exchange on the D channel to obtain first Call Appearance information.

2. A method according to claim 1 further comprising the step of:

- (c) obtaining <sup>1st</sup> first Call Appearance information from the D channel.

3. A method according to claim 2 further comprising the steps of:

- (d) putting the first call on hold;
- (e) generating a second call from PDN1 to PDN2 in the same BRI circuit; and
- (f) monitoring the <sup>2nd</sup> message exchange on the D channel to obtain second Call Appearance information.

4. A method according to claim 3 further comprising the step of:

- (g) obtaining <sup>2nd</sup> second Call Appearance information from the D channel.

5. A method according to claim 4 further comprising the step of:

- (h) repeating the steps of putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal.

6. A method according to claim 5 further comprising the step of:

- (i) repeating steps a-h with calls being generated from PDN2 to PDN1.

7. A PBX device coupled to multiple ISDN BRIs, said PBX device comprising:

- (a) dialing means for generating a first call from PDN1 to PDN2 in the same BRI circuit; and  
(b) monitoring means monitoring the message exchange on the D channel to obtain first Call Appearance information.

8. A PBX device according to claim 7 further comprising:

- (c) capture means for obtaining first Call Appearance information from the D channel.

9. A PBX device according to claim 8 further comprising:

- (d) holding means for putting the first call on hold; and  
(e) repeating means coupled to said dialing means and said monitoring means, wherein upon putting the

first call on hold, the repeating means causes the dialing means to generate a second call from PDN1 to PDN2 in the same BRI circuit, and causes the monitoring means to monitor the message exchange on the D channel to obtain second Call Appearance information.

10. A PBX device according to claim 9 wherein said repeating means is coupled to said capture means and causes said capture means to obtain second Call Appearance information from the D channel.

11. A PBX device according to claim 10 wherein said repeating means causes said holding means, said dialing means and said monitoring means to repeat the steps of putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal.

12. A PBX device according to claim 11 wherein said repeating means causes said dialing means, said holding means and said monitoring means to repeat the steps of generating a call, monitoring the D channel, putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal with calls being generated from PDN2 to PDN1.

13. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in a microprocessor with an associated software program.

5 14. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in a field programmable gate array.

10 15. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in an application specific integrated circuit.

15 16. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in firmware in the PBX device.

20 17. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in a microprocessor with an associated software program.

25 18. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in a field programmable gate array.

19. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in an application specific integrated circuit.

20. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in firmware in the PBX device.

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